

Claims

1. Radio communication system

- 5 - in which a base station (NB^1 , NB^2 , NB^3 ; NB) is provided, via which are sent first communication connections, for which signals are transmitted via an air interface using a first carrier frequency, and second communication connections for which signals are sent via the air interface using a second carrier frequency,
- 10 - in which a first radio network controller (RNC1; RNC A) is provided, via which the first communication connections are sent,
- in which a second radio network controller (RNC2; RNC B) is provided, via which the second communication connections are sent,
- 15 - in which the base station (NB^1 , NB^2 , NB^3 ; NB) has a common high-frequency component (HF^1 , HF^2 , HF^3 ; HF') which processes signals of the first communication connections and signals of the second communication connections,
- in which the base station (NB^1 , NB^2 , NB^3 ; NB) has a first
- 20 communication port (CP A) and a second communication port (CP B), the first communication port (CP A) being connected to the first radio network controller (RNC1; RNC A) via a first interface and the second communication port (CP B) being connected to the second radio network controller (RNC2; RNC B) via a second
- 25 interface,
- in which in the base station (NB^1 , NB^2 , NB^3 ; NB) the first communication connections are sent via the first communication port (CP A) and the second communication connections are sent via the second communication port (CP B),
- 30 - in which means are provided by means of which data of the first communication connections and of the second communication connections is provided with an identifier in each case,

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- in which the base station (NB¹, NB², NB³; NB) has means by means of which the first and second communication connections are assigned to the first and second communication port (CP A, CP B) respectively on the basis of the identifier.
- 2. Radio communication system according to Claim 1,
 - in which the high-frequency component (HF¹, HF², HF³; HF') has a send and a receive branch,
 - 10 - in which the send branch and the receive branch are connected to an antenna via a duplex filter to split send and receive band,
 - in which the send branch comprises a power amplifier,
 - in which the receive branch comprises a pre-amplifier,
 - in which the receive branch has a splitter which is connected to the output of the pre-amplifier and which has two broadband outputs which each cover the complete receive band.
- 3. Radio communication system according to Claim 2,
 - in which the common high-frequency component (HF¹, HF², HF³; HF') comprises a first high-frequency branch and a second high-frequency branch, the first high-frequency branch being connected to a first antenna (A1, A1') and the second high-frequency branch being connected to a second antenna (A2, A2'),
 - in which the first high-frequency branch and the second high-frequency branch are essentially identical in structure and each have a duplex filter (DF1, DF1', DF2, DF2'), a send branch with a power amplifier (LV1, LV1', LV2, LV2') and a receive branch with a pre-amplifier (VV1, VV1', VV2, VV2') and a splitter (SP1, SP1', SP2, SP2'),
 - 30 - in which signals with the first carrier frequency are sent to the send branch of the first high-frequency branch and signals with the second carrier frequency are sent to the send branch of the second high-frequency branch.

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4. Radio communication system according to Claim 3,
- in which the send branch in each case has a combiner (K01', K02')
to which signals with the first carrier frequency and signals
5 with the second carrier frequency are sent, and the output of
which is connected to the input of the power amplifier (LV1',
LV2').
5. Radio communication system according to one of Claims 1 to 4,
10 - in which the base station (NB¹, NB², NB³; NB) transmits signals to
or receives signals from a plurality of sectors, and in which a
common high-frequency component (HF¹, HF², HF³; HF') is provided
in the base station for each sector.
- 15 6. Radio communication system according to one of Claims 1 to 5,
- in which the base station (NB¹, NB², NB³; NB) has a plurality of
signal processing devices which are employed as a pool, in order
to process signals of first communication connections and signals
of second communication connections.
- 20 7. Radio communication system according to one of Claims 1 to 5,
- in which the base station (NB¹, NB², NB³; NB) has a signal
processing device in which dp programs are provided for
processing the signals with the first carrier frequency and the
25 signals with the second carrier frequency, the dp programs
emulating two logical signal processing devices.